

# Municipal Setting Designations



MSDs: Another tool for Houston

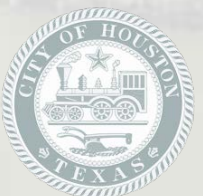
Mark A. Wooten Jr.  
Assistant Program Manager

Municipal Setting Designations (MSDs)



# Agenda

- City of Houston - Programmatic
  - What the MSD is
  - Who the MSD impacts
  - Steps in the MSD process
- MSD Applicant - Technical
  - Specific information on the site  
4310 Directors Row
  - **Questions / Comments**



# Environmental Protection in Texas

- ❑ The State of Texas has jurisdiction for environmental protection
  - ❑ Texas Commission on Environmental Quality (TCEQ)

- ❑ Environmental Complaints



- ❑ By Phone: 1-888-777-3186
  - ❑ Online: <http://www5.tceq.texas.gov/oce/complaints/>



- ❑ By Phone: 311
  - ❑ Online: [http://webintake.houstontx.gov/web\\_intake/Controller](http://webintake.houstontx.gov/web_intake/Controller)

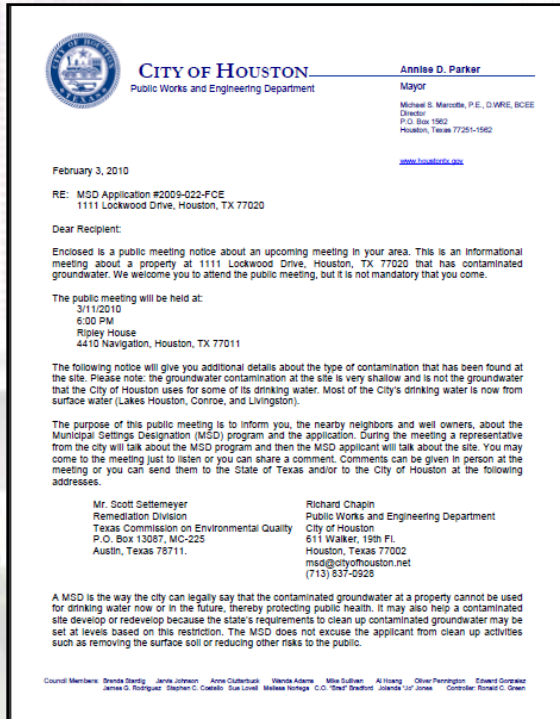


Municipal Setting Designations (MSDs)



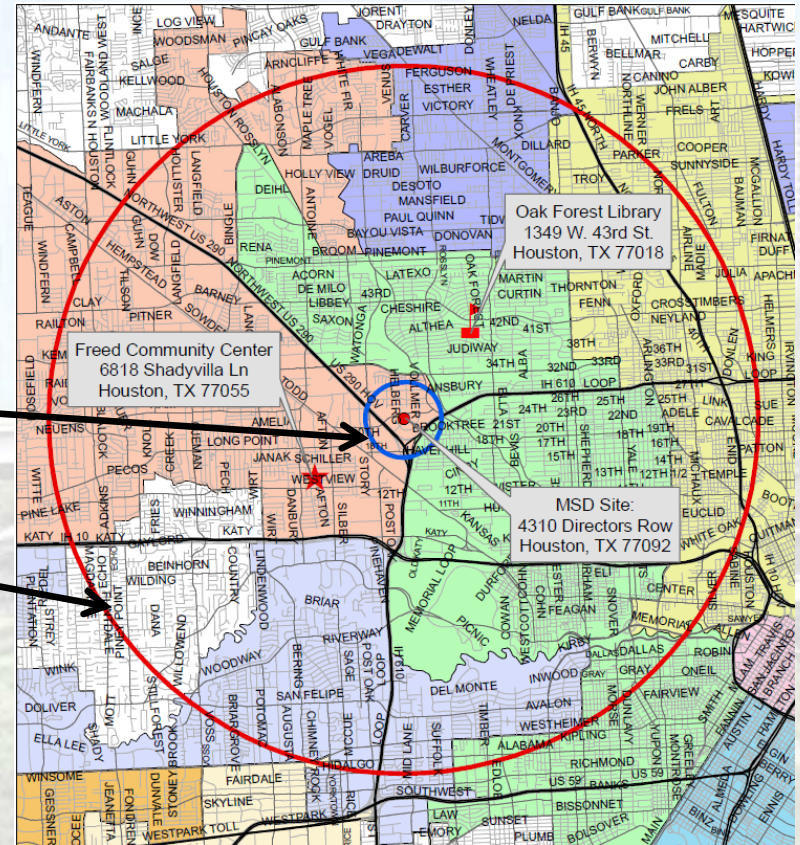


# MSD Notice Letters



Property Owners  
First-Class Mail  
½-Mile Radius  
City Requirement

Water Well Owners  
Certified Mail  
5-Mile Radius  
State Requirement



*If you received a notice through certified mail that means you have a water well according to the State's records*

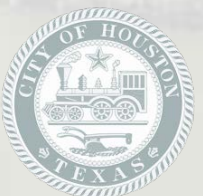


**Municipal Setting Designations (MSDs)**

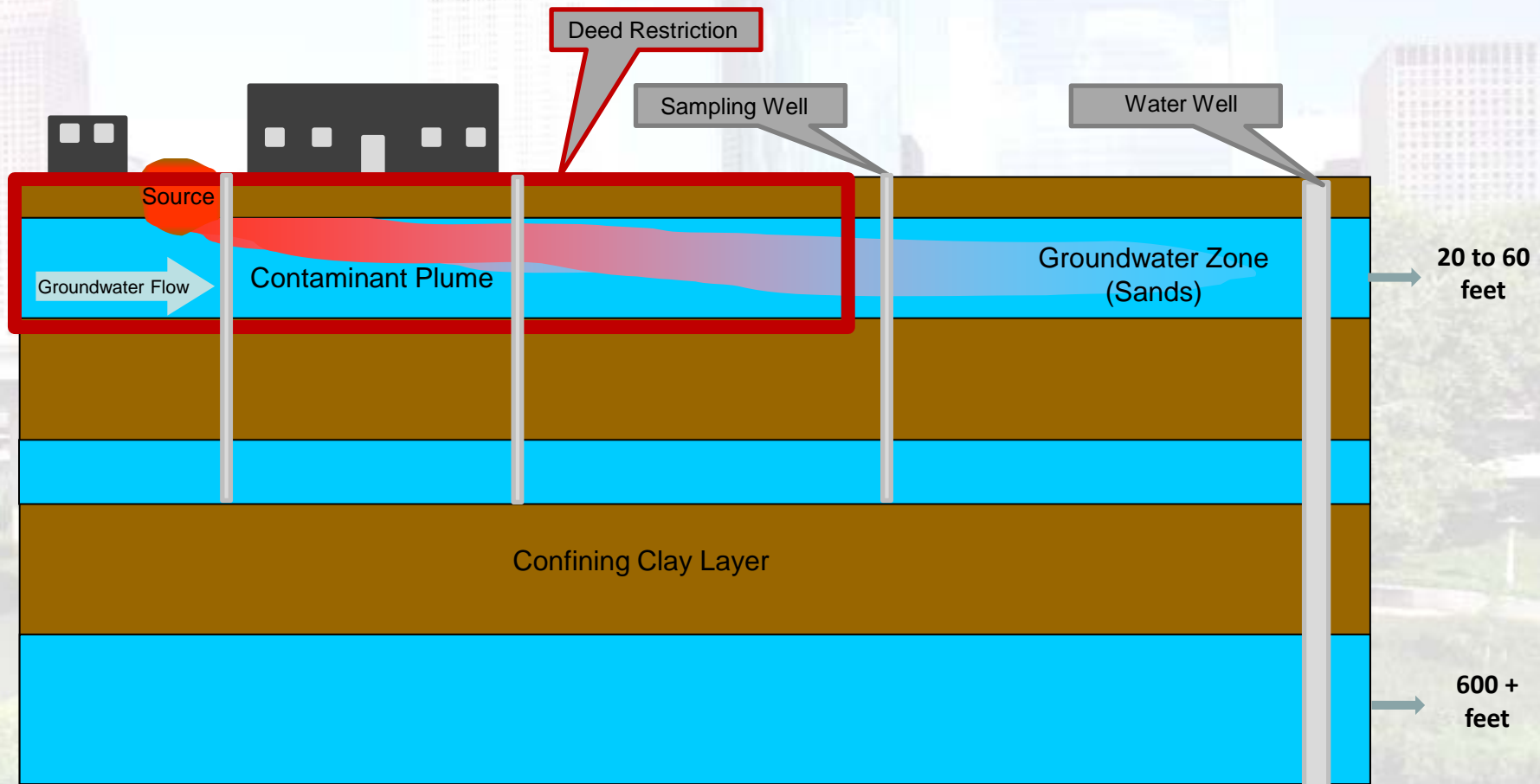


# What an MSD is

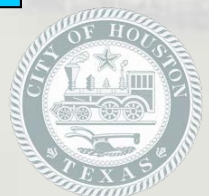
- **Voluntary** deed restriction to prevent the use of contaminated groundwater
  - No water wells on the subject property for drinking water purposes
  - A legally binding way to ensure the public is not exposed to contaminants



# Groundwater Contamination

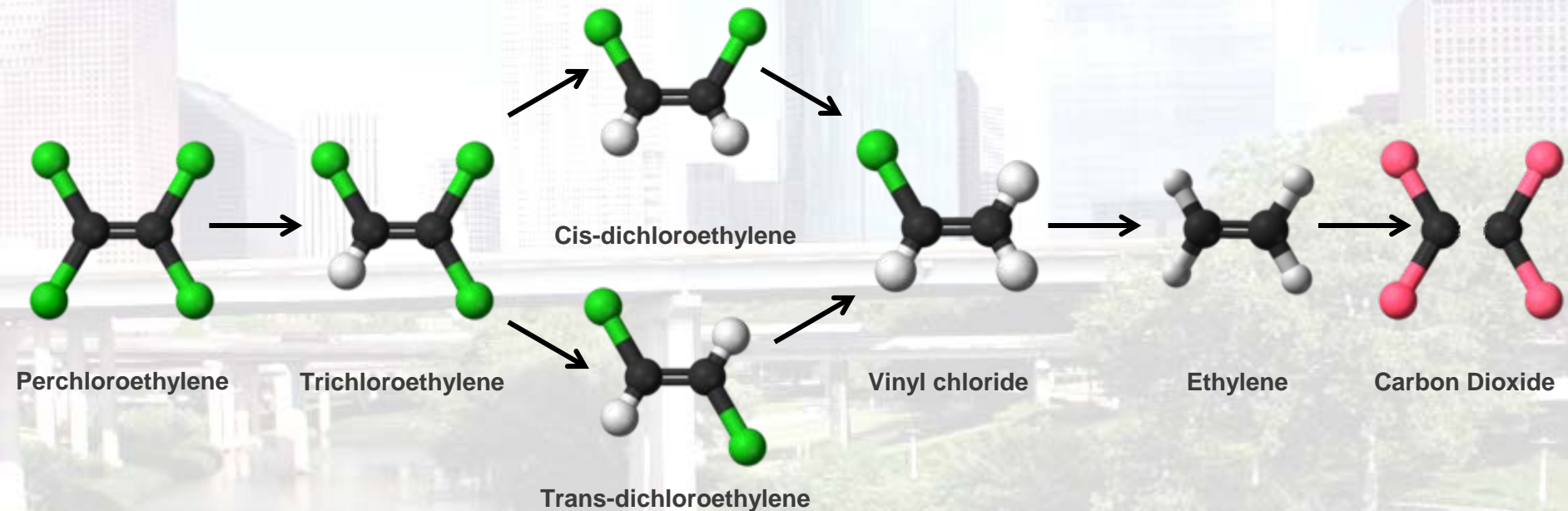


*Please Note: Houston has shallow contaminated groundwater scattered across the City*





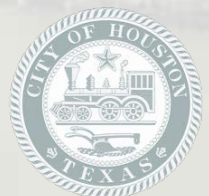
# Chemical Degradation



This process takes decades, but is found to be the most efficient strategy.

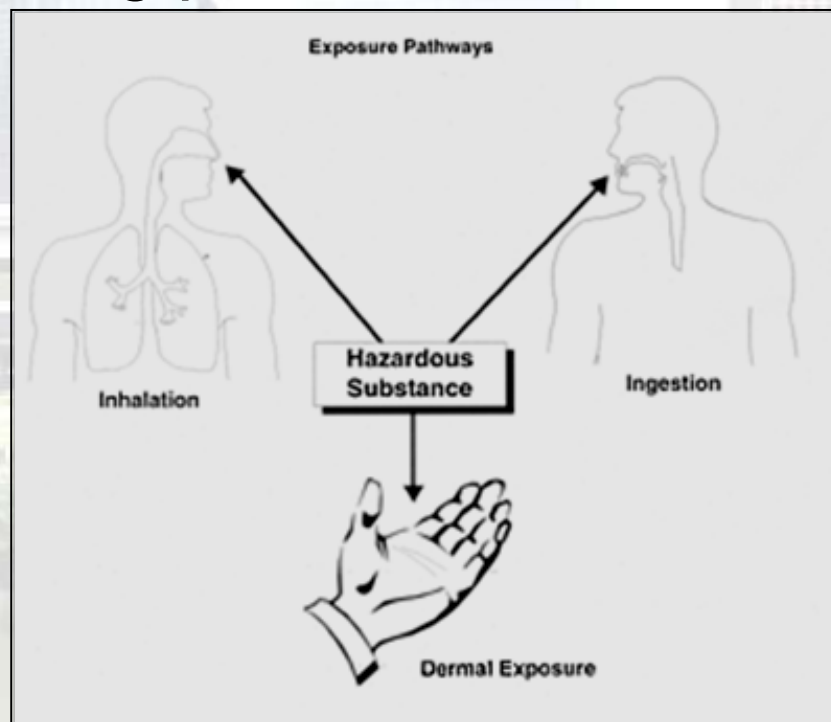


Municipal Setting Designations (MSDs)



# Exposure Pathways

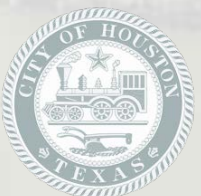
- Cleanup Programs are based on public exposure to contaminants and reducing public health risks
- Exposure Pathways
  - ~~Ingestion~~
  - Inhalation
  - Contact (dermal)
  - Soil
  - Groundwater to surface water
  - Ecological





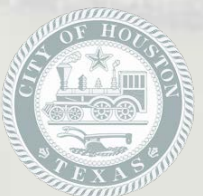
# Environmental Cleanup

- The MSD is only **one step** in the cleanup process
- An MSD does **NOT** excuse the applicant from reducing risks to the public
- Responsible Parties are always responsible



# Who the MSD Impacts

- An MSD does not affect you!
  - An MSD **DOES NOT AFFECT** your property
  - An MSD **DOES NOT AFFECT** your water well
  - There are **NO REQUIREMENTS** on you
- Drinking water supplied by the City is not affected



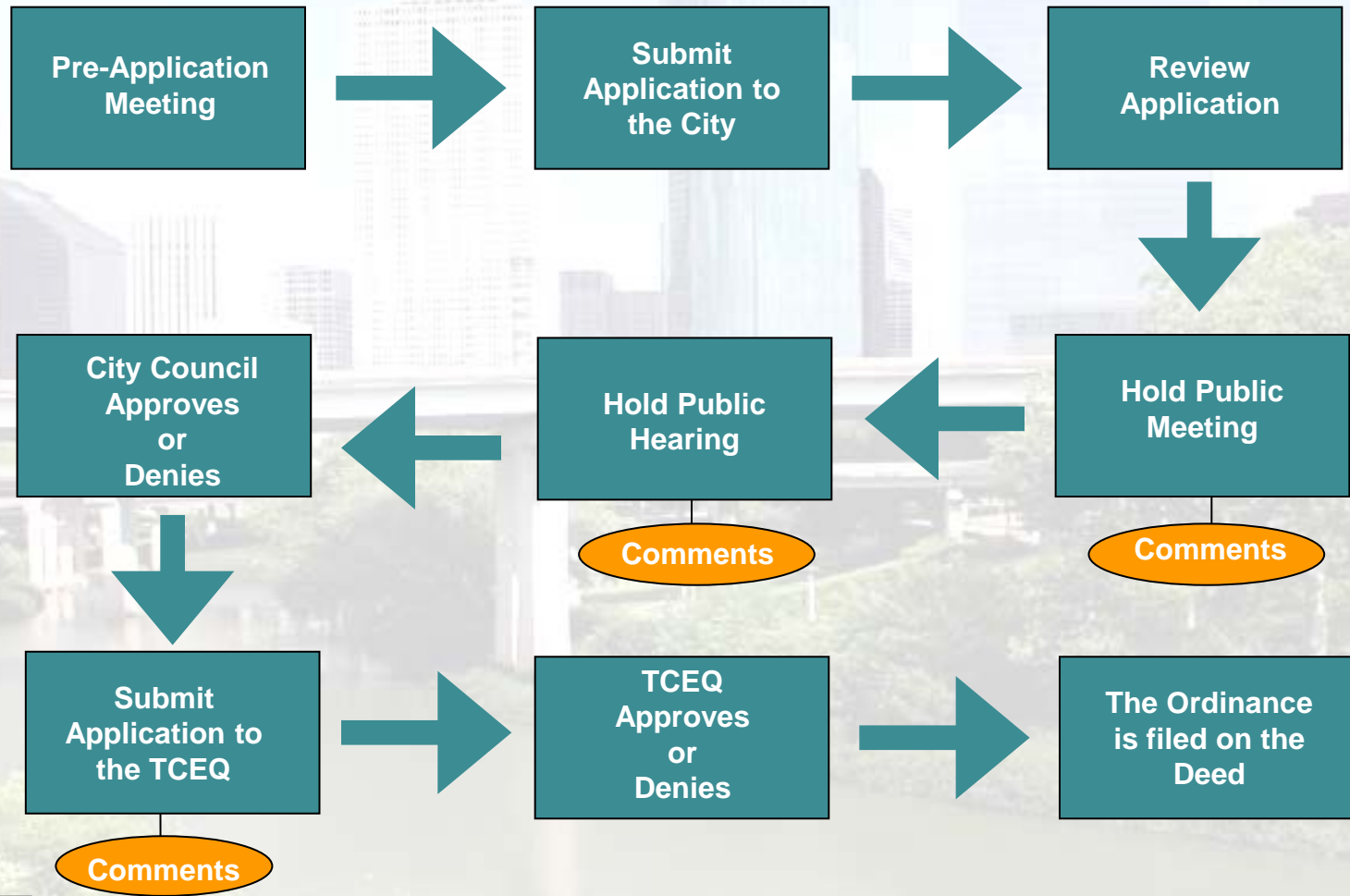
# City's Requirements of the Applicant

- Enrollment in a State or Federal cleanup program
- Thorough investigation confirming that the groundwater plume is stable or decreasing, and delineated
- Source of contamination has been removed
- A **third party** Engineer (P.E.) or Geologist (P.G.) must certify application

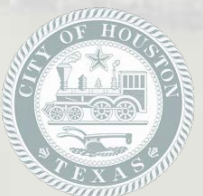




# Steps in the Process

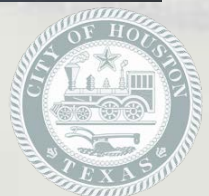


Municipal Setting Designations (MSDs)

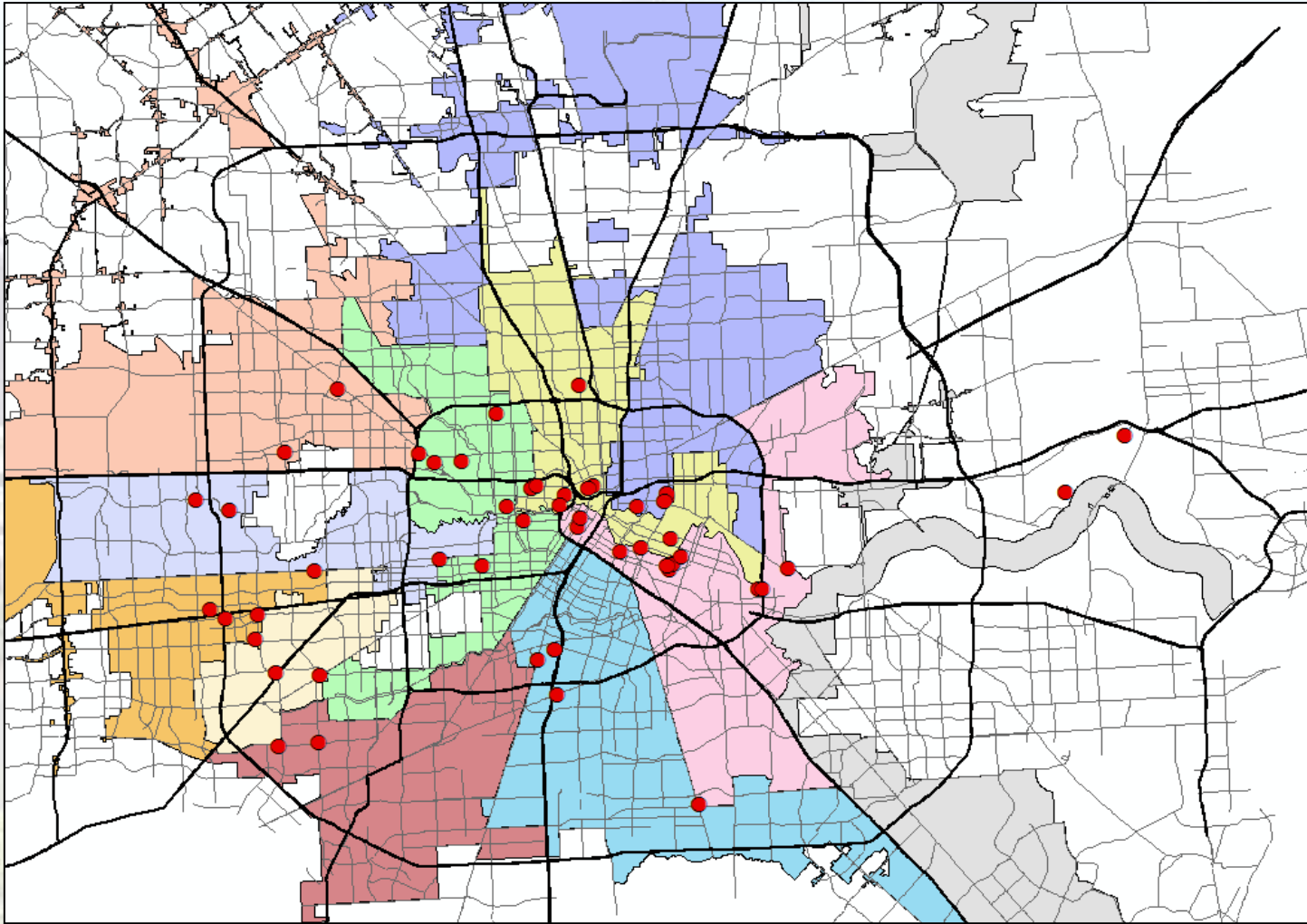


# Why Support An MSD?

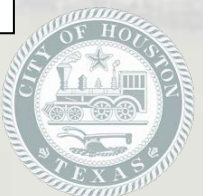
- Protects the public from consumption of contaminated groundwater
- Encourages clean-up of contaminated sites
- Promotes redevelopment of under-utilized properties



# MSD Sites in Houston



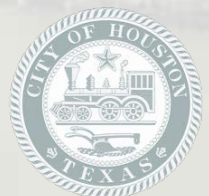
Municipal Setting Designations (MSDs)





# MSD Application Availability

- Oak Forest Library
  - 1349 W. 43<sup>rd</sup> Street
  - Reference Desk
- Also available online at:  
[www.houstonmsd.org](http://www.houstonmsd.org)
  - MSD in Review Page



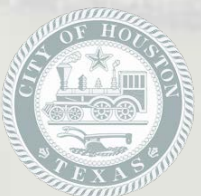
# Public Hearing

- Date: November 6, 2014
- Time: 10:00 AM
- Place: City Council Chamber (Committee Meeting)  
Transportation, Technology, & Infrastructure
- Address: 901 Bagby, Second Floor  
Houston, Texas 77002

Any person wishing to speak on this issue must arrive at least 15 min early and sign the speakers list located on the front desk.



**Municipal Setting Designations (MSDs)**



# Contact Information

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Program Manager

**Mark Wooten**  
Assistant Program Manager

**Public Works & Engineering**  
**City of Houston,**  
**1002 Washington, 3<sup>rd</sup> Floor**  
**Houston, Texas 77002**

**[msd@houstontx.gov](mailto:msd@houstontx.gov)**  
**(832) 394-9005**



**Municipal Setting Designations (MSDs)**







# City of Houston

Municipal Setting Designation Application  
MSD-2014-072-TSC

Public Meeting  
October 30, 2014



# **Tideland Signal Corporation**

**4310 Directors Row  
Houston, Harris County, Texas**

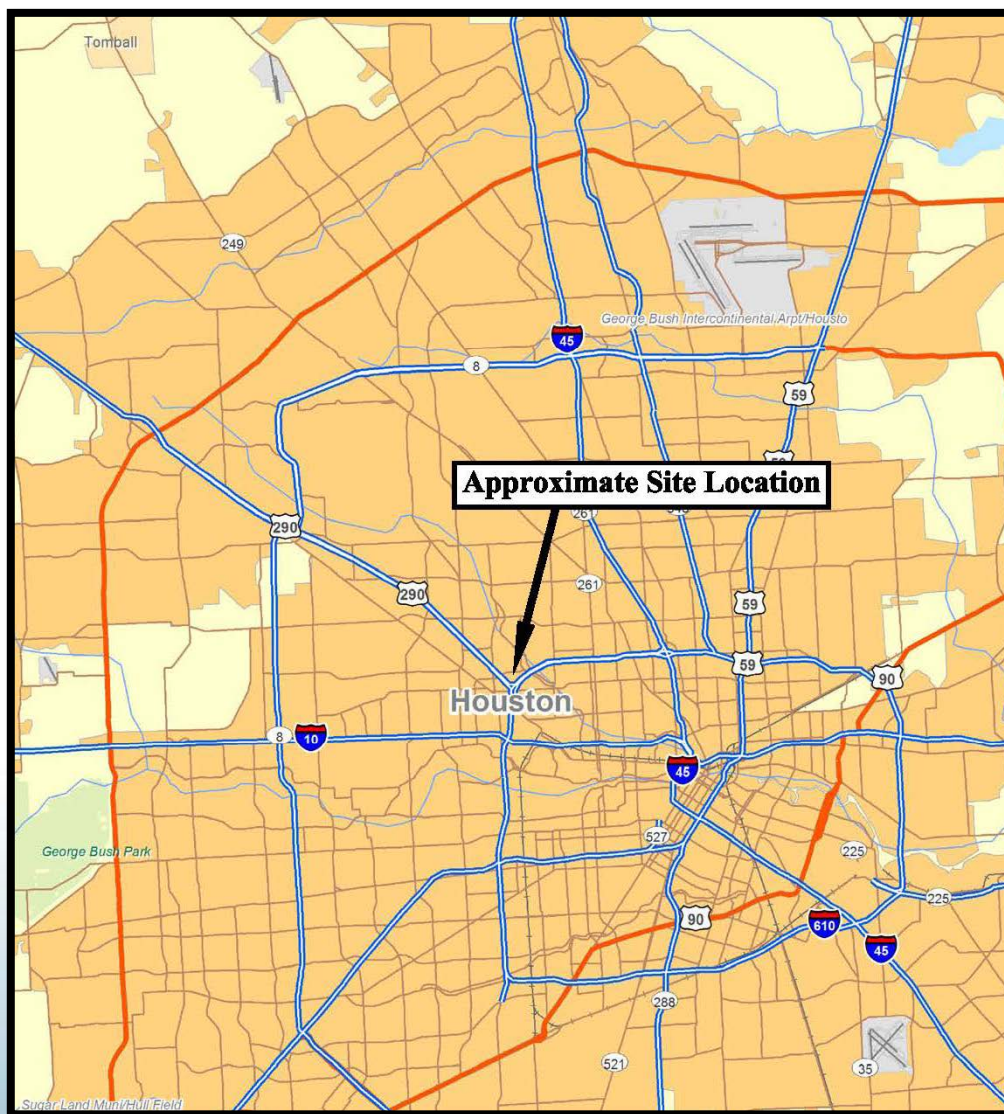
**Contact Information:**

**Dale Williams  
Vice-President Quality Assurance  
4310 Directors Row  
Houston, Texas 77092**

**Consultant Information:**

**ESE Partners  
19416 Park Row, Suite 120  
Houston, Texas 77084  
281-501-6100    [www.esepartners.com](http://www.esepartners.com)**

# Site Location







# The Site Today

- Approximately 2.29 Acres
- 42,000 square foot assembly/office facility
- Occupied by Tideland Signal Corporation
- Supplies marine navigation lanterns, buoys, fog signals, etc.

# Site's Contamination

- Groundwater impacted by Chemicals of Concern (COCs)
  - Acetone
  - Benzene
  - cis 1,2-DCE
  - 1,2-DCA
  - Ethylbenzene
  - PCE
  - TCE
  - TPH
  - Vinyl chloride
- Impacted soils have been removed and remaining concentrations are protective of human exposure

# Site Before

- The Site has historically been commercial and light industrial in use from at least 1973 to the present
- Contaminant source was a 500-gallon underground storage tank (UST) formerly containing acetone
- No other contaminant sources at the site





# Applicant's Responsibility

- Contaminants present in shallow groundwater not being used or ingested
- No vapor exposure present
- Concrete ground cover throughout Site: No mingling of subsurface contaminants with rain or surface water runoff



# Investigation & Clean Up Activities

- Several soil and groundwater sampling events have been completed at the site since the early 1990s
- Soil and groundwater impacts have been delineated
  - Site was entered into the Texas Commission on Environmental Quality (TCEQ) Voluntary Cleanup Program (VCP) in May 2012
  - Monitored natural attenuation (MNA) used as remedy for groundwater contamination



# Non-Ingestion Contact

- All soil and groundwater contaminants are below non-ingestion exposure pathway levels (soil-air-vapor inhalation and groundwater-air-vapor inhalation)
- The MSD for the Site will be placed in the City of Houston's utility database
  - Utility workers will be notified when working on Site property



# Soil

- No soil impacts above direct exposure pathway
- Site is in use and has an existing concrete cover throughout, including former acetone tank area
- Impacted soil was removed along with tank during remedial activities in 1991

# Vapors

- Contaminant impacts in soils **do not** exceed established TCEQ concentration levels for protection of human health through vapor inhalation
- Contaminant impacts in groundwater **do not** exceed established TCEQ concentration levels for protection of human health through vapor inhalation

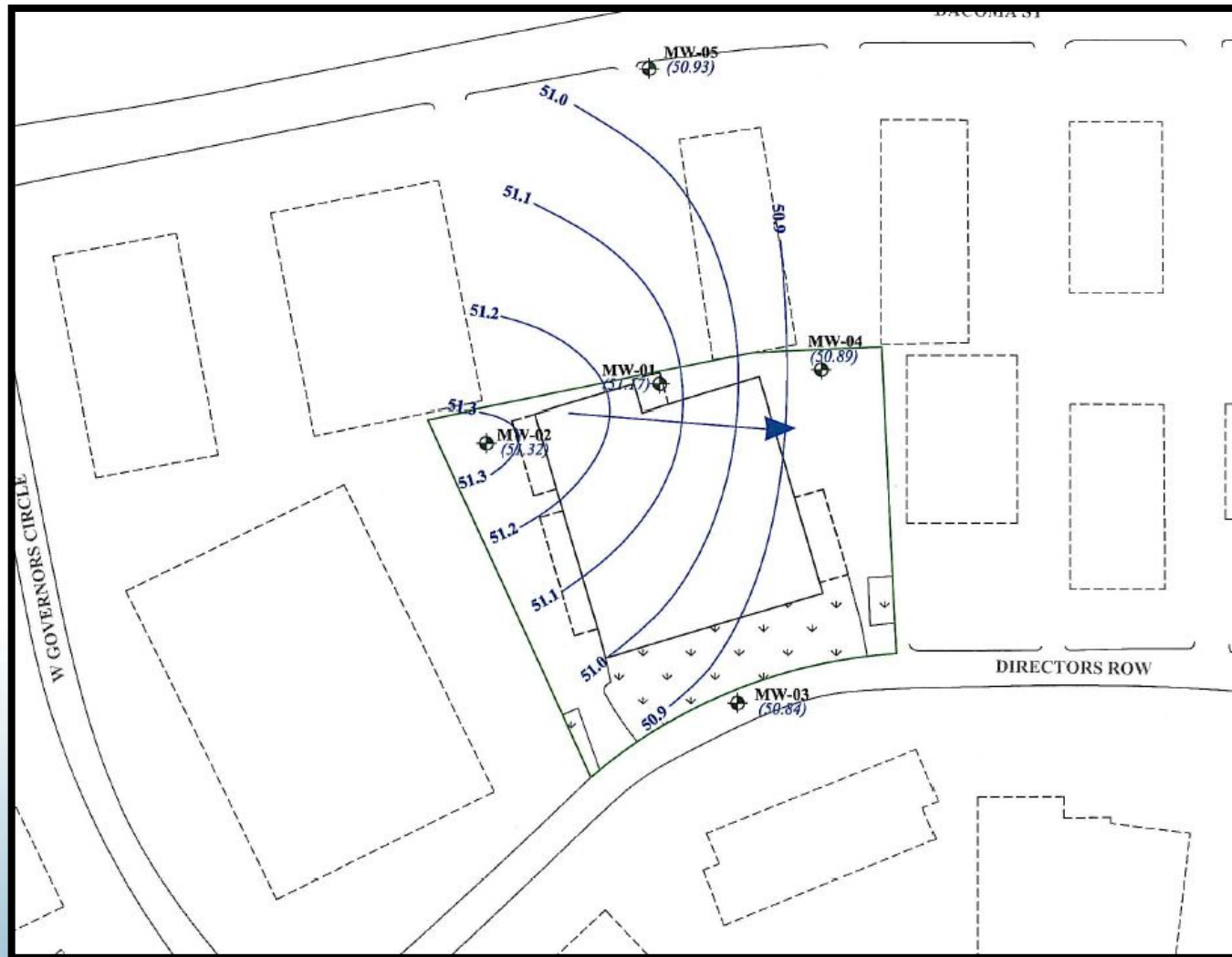
# Surface Water

- Concrete cover
  - Storm water run off is not exposed to former acetone tank area due to the presence of concrete cover
- No nearby surface water bodies
  - Impacted groundwater is not present in the immediate vicinity of a surface water body
  - nearest surface water body to the Site is White Oak Bayou, approximately 0.5 miles to the east



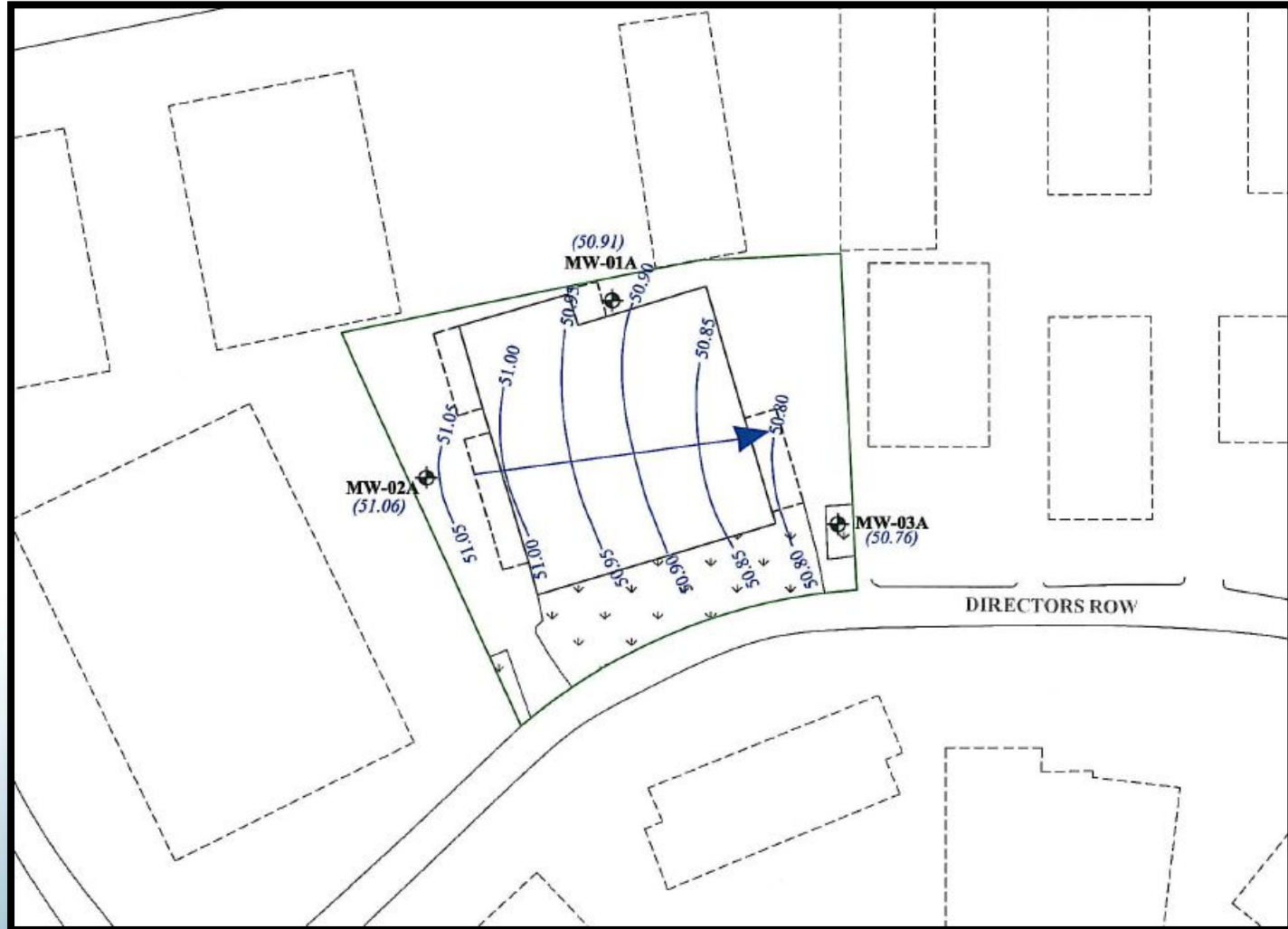
# Subsurface Map

Site Upper Groundwater Gradient  
Map – February 2014



# Subsurface Map

Site Lower Groundwater Gradient  
Map – February 2014



# Groundwater Plume

- Fully delineated, vertically and horizontally
- Four consecutive quarters of groundwater data collected from the source area shows contaminant plume is stable
  - Groundwater contaminant concentrations in apparent source area wells (MW-1, MW-2 and MW-3) demonstrated to be stable

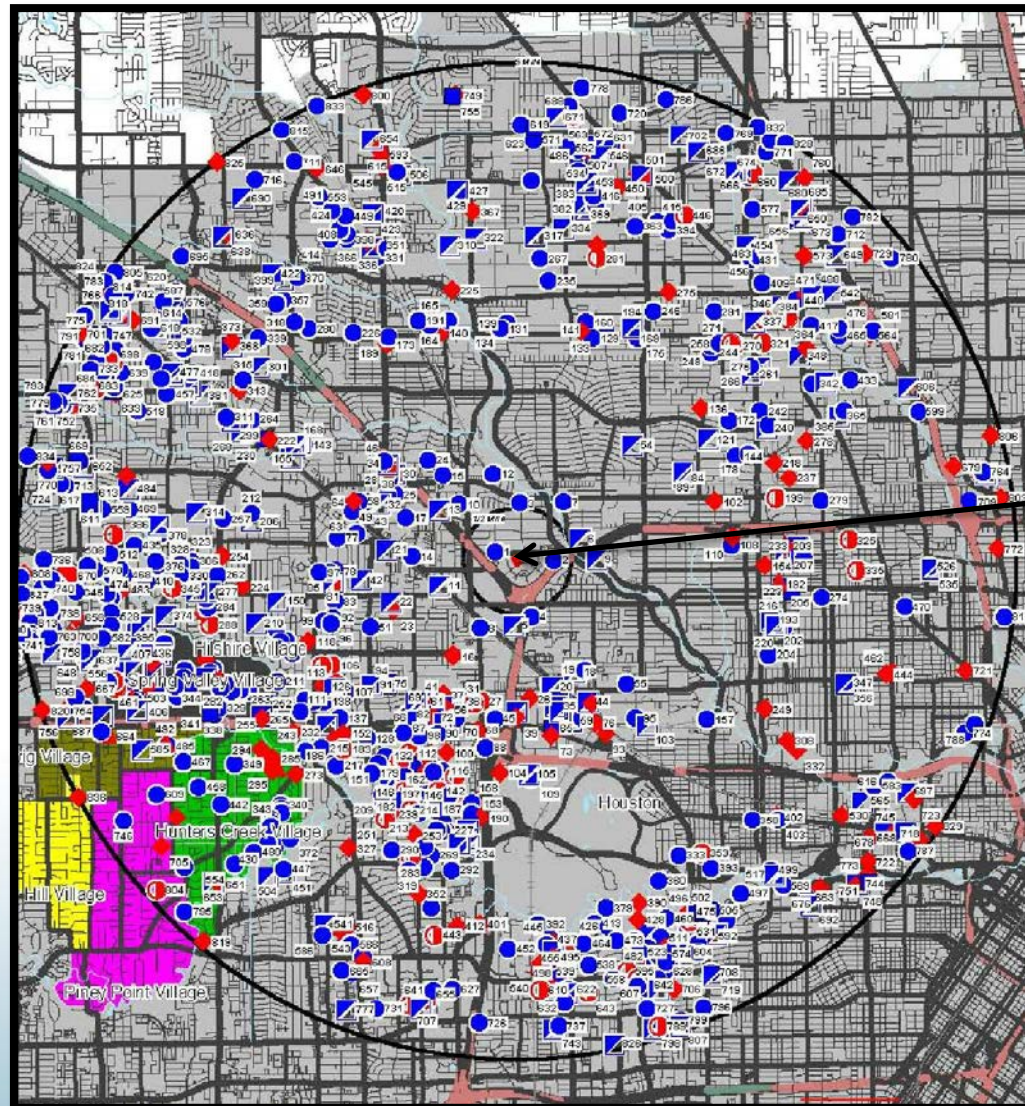


# Groundwater Plume- 5 Mile Radius



## Legend

-  Target Property (TP)
-  TCEQ
-  HGSD
-  TWDB
-  SSDRD
-  NWIS
-  WUD



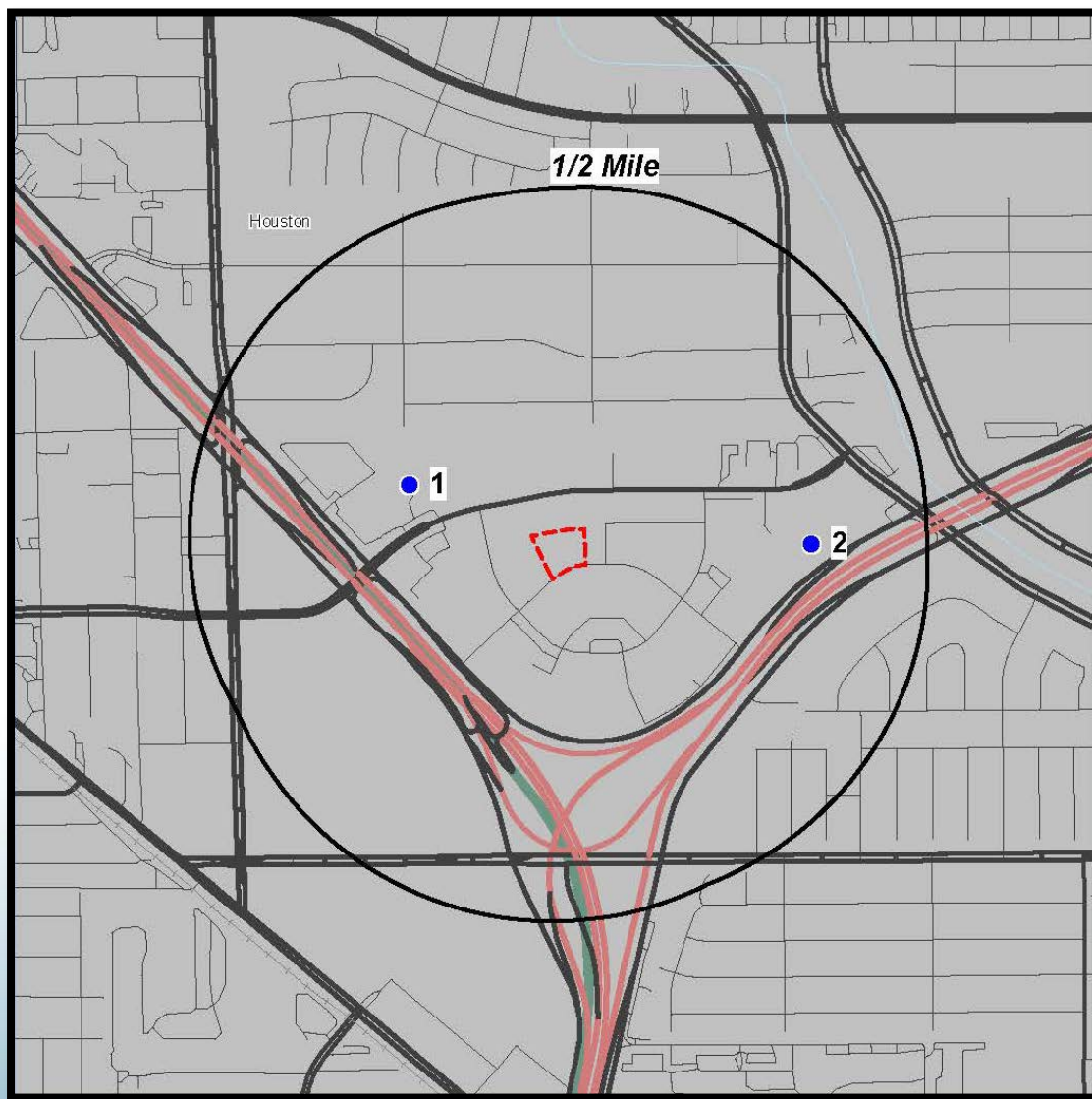
Plume



# Groundwater Plume- 1/2 Mile Radius

## Legend

-  Target Property (TP)
-  TCEQ
-  HGSD
-  TWDB
-  SSDRD
-  NWIS
-  WUD





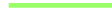








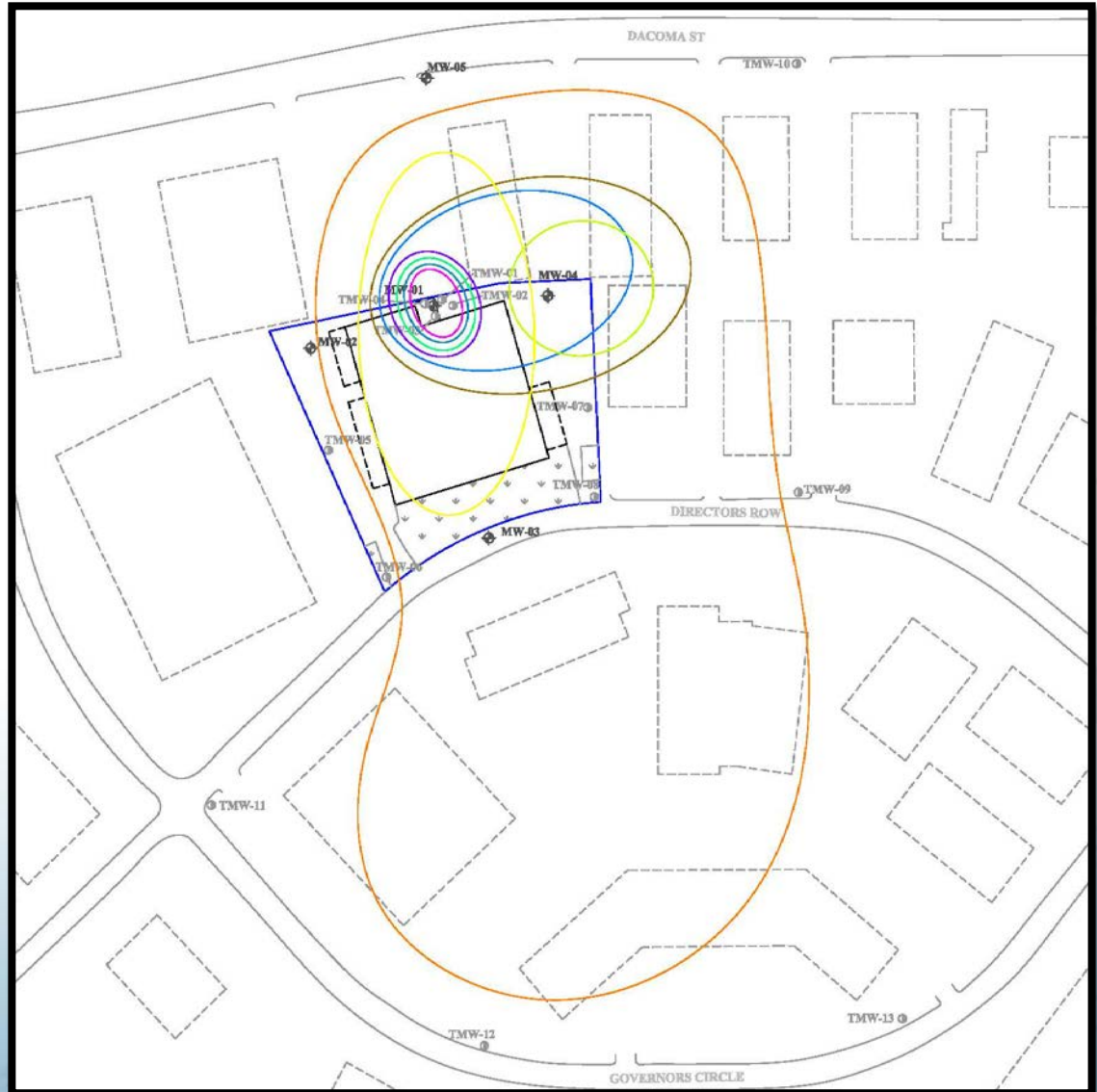


# Site Map



## Legend












-  Designated property boundary
-  PCE
-  TCE
-  Cis-1,2-DCE
-  1,2-DCA
-  Acetone
-  Benzene
-  Vinyl Chloride
-  Ethylbenzene
-  TPH
-  Permanent groundwater monitor well



# Aerial Photographs



## Legend

-  Designated property boundary
-  PCE
-  TCE
-  Cis-1,2-DCE
-  1,2-DCA
-  Acetone
-  Benzene
-  Vinyl Chloride
-  Ethylbenzene
-  TPH
-  Permanent groundwater monitor well





# Summary

- The Site, an approximate 2.29 acre commercial property, is located on Directors Row (approximately ¼ mile north of intersection of 610 North and Highway 290)
- Contaminant concentrations are protective of non-ingestion exposure pathways
- Individual contaminant concentrations in groundwater are stable and the majority are decreasing
- Contaminant source has been removed